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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,543	10/06/1999	ALEXANDR ALEXANDROVICH MIROSHIN	8472-018	4468

7590 01/23/2003

PENNIE & EDMONDS  
1667 K STREET NW  
WASHINGTON, DC 20006

EXAMINER

HON, SOW FUN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 01/23/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/367,543

Applicant(s)

MIROSHIN ET AL.

Examiner

Sow-Fun Hon

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 November 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 97-102, 135 and 164-171 is/are pending in the application.
- 4a) Of the above claim(s) 164-171 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 97-102 and 135 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Lack of Unity Requirements***

1. Newly submitted claims 164-171 are directed to an invention that lacks unity with the invention originally claimed for the following reasons:

Evidence of lack of unity between the groups is found in Gvon et al. (US Patent 5,739,296) over Okuzaki et al. (US 5,712,024) wherein they are found to disclose the features of instant claim 97. As such, the special technical features of the claimed invention are not found to define a contribution over the prior art.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 164-171 are withdrawn from consideration as being directed to a nonelected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Response to Amendment***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Withdrawn Rejections***

3. The 35 U.S.C. 112,2<sup>nd</sup> paragraph rejections of claims 97-102, 135 in Paper # 17 (mailed 08/13/02) have been withdrawn due to Applicant's clarifications, affirmations and amendments in Paper # 18 (filed 11/12/02).

Art Unit: 1772

4. The 35 U.S.C. 103(a) rejection of claims 97-102, 135 in Paper # 17 (mailed 08/13/02) have been withdrawn due to Applicant's clarifications, affirmations and amendments in Paper # 18 (filed 11/12/02).

***New Rejections***

***Claim Rejections - 35 USC § 112***

5. Claim 102 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the main optical axis of the birefringent layer is at an angle of 45 degrees relative to the main optical axis of the substrate.

***Claim Rejections – 35 USC § 103***

6. Claims 97-102, 135 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvon et al. in view of Okuzaki et al.

Gvon et al. teaches a polarizer comprising a birefringent layer of a polarizing coating on a birefringent polymeric film substrate. The polarizing coating contains an organic salt of a dichroic anionic dye of general formula {Chromogen}-(XO<sup>-</sup>M<sup>+</sup>)<sub>n</sub> (dichroic plurality of supramolecular complexes formed from one or more of the organic dyestuffs of the formula: (SO<sub>3</sub>M)<sub>n</sub> wherein M is M<sup>+</sup> (cation) so that SO<sub>3</sub><sup>-</sup> has to be the counter anion XO<sup>-</sup>)(column 5, lines 45-68 and column 15, lines 1-68). Gvon et al. teaches that the dyestuffs are treated with tetraalkylammonium salts (for example, benzyl-dimethyl-cetylammmonium chloride) (column 9,

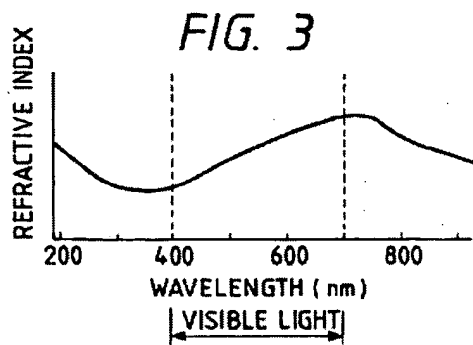
Art Unit: 1772

lines 10-15) wherein the tetraalkylammonium cations are organic cations. (Applicant has defined organic salt as having an organic cation  $M^+$ ).

Gvon et al. teaches that the polarizing coating can be applied on a reflecting layer (surface). The polarizing coating has an aligning (orientating) influence on the liquid crystal layer, which allows omitting an additional alignment (orienting) layer used with conventional polarizers (column 9, lines 35-45) but does not rule out the additional alignment layer since it is used with conventional polarizers. The dye is inherently anisotropically absorbing since it is dichroic and has a polarization axis (column 9, lines 20-68) which demonstrates anisotropic absorbance, and has color (column 15, lines 1-30) which demonstrates selective absorbance in the visible electromagnetic spectrum in order to have an absorption peak in there.

Gvon et al. however fails to specifically disclose that the anisotropically absorbing birefringent layer has at least one refraction index which increases as the polarizable light wavelength increases at least at a certain range of the wavelength spectrum.

Okuzaki et al. teaches that a dye (coloring matter) having anisotropic absorbance (an absorption peak) in the desired wavelength region must be contained in the film in order to have the desired refractive index dispersion shown below where it can be seen that the refractive index does grow as the wavelength increases at least at a certain range of the wavelength spectrum, from 400 to 700 nm in the example (column 4, lines 1-5).



Because Okuzaki et al. teaches that when a dye having anisotropic absorbance is contained in the film, the refractive index grows as the wavelength increases at least in a certain range of the wavelength spectrum, it would have been obvious to one of ordinary skill in the art to have determined that the polarizable dye coating of Gvon et al. has at least one refractive index which grows as the polarizable light wavelength increases at least in a certain range of the wavelength spectrum.

### *Response to Arguments*

7. Applicant's arguments with respect to claims 97-102, 135 as directed to the salt of the dichroic dye after amendment have been considered but are moot in view of the new ground(s) of rejection.
8. Applicant's arguments with respect to the valid use of Gvon et al. in view of Okuzaki et al. apart from the salt are addressed below.
9. Applicant argues that the polarizer of Gvon et al. is just a dichroic polarizer, and not one which uses abnormal dispersion since Gvon et al. does not teach the latter feature. Applicant is respectfully reminded that Okuzaki et al. teaches that a dye (coloring matter) having anisotropic

Art Unit: 1772

absorbance (an absorption peak) in the desired wavelength region must be contained in the film in order to have the desired abnormal dispersion in the refractive index of the material, wherein the refractive index grows as the wavelength increases at least at a certain range of the wavelength spectrum ('024, column 4, lines 1-5).

10. Applicant argues that Okuzaki et al. teaches an isotropic absorbing layer, and so does not disclose a birefringent anisotropically absorbing layer as presently claimed. Applicant is respectfully reminded that Okuzaki et al. is being used as a teaching reference which teaches that the polarizer of Gvon et al. also has the feature of abnormal dispersion since the polarizing coating contains a dye (coloring matter) having anisotropic absorbance (an absorption peak) in the desired wavelength region.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 1772

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

874  
Sow-Fun Hon

01/21/03

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

1/21/03